

IN THE CLAIMS:

All claims with their current status, inclusive of current amendments, are presented below.

1. (Amended hereby) An apparatus for the handling of a metal strip, wherein the apparatus includes a first coiler and a second coiler and a moveable roll, a strip path being defined between a first location and a second location, wherein a movement of the said movable roll changing can change the length of the said strip path, said coilers having a rotational angular position that changes with rotation thereof, said the apparatus further comprising including a measurer of the rotational angular position of at least one of the said coilers, and an actuator for the said moveable roll, the said actuator being provided with signals from the said measurer, wherein the position of said the moveable roll can be being defined, at least in part, as a function of the rotational angular position of at least one of the said coilers.
2. (Amended hereby) An The apparatus according to of claim 1, wherein said measurer comprises in which one or both of the coilers are fitted with at least one angular position transducers transducer, wherein said at least one angular position transducer can to measure the rotational angular position of at least one of said the coiler or coilers during coiling or uncoiling.
3. (Amended hereby) An The apparatus according to of claim 1, further comprising in which the moveable roll is moved by a roll position controller, wherein said roll position controller can control the movement of said moveable roll via said actuator, wherein said actuator comprises such as a hydraulic cylinder.
4. (Amended hereby) An The apparatus according to of claim 1, further comprising in which a moveable roll position transducer, wherein said moveable roll position transducer can be is used to measure the position of the said moveable roll.

5. (Amended hereby) An The apparatus according to of claim 1, further comprising in which an electronic controller and a servo valve, wherein said electronic controller and said servo valve can be are used to control the position of the said moveable roll according to a reference position.

6. (Amended hereby) An The apparatus according to of claim 1, further comprising which includes a control system which controls the position of the rolls, the, wherein said control system can control controls the position of said movable roll the rolls in response to information from the said measurer or-measurers.

7. (Amended hereby) An The apparatus according to of claim 1, in which a wherein said moveable roll is provided between one of said coilers a coiler and a rolling mill stand or other processing stage.

8. (Amended hereby) An apparatus for the coiling/uncoiling of a metal strip, comprising at least one coiler for coiling or uncoiling a metal strip thereabout, said apparatus providing a strip path for a metal strip to follow when a metal strip is operatively connected to said at least one coiler, said apparatus further comprising characterised by having a moveable roll in the said strip path, wherein a such that movement of this said moveable roll changes can change the length of the said strip path to the coiler/uncoiler, said at least one coiler having a rotational angular position that changes with rotation thereof, said apparatus further comprising an angular position and further characterized by having a transducer, wherein said angular position tranducer can measure the rotational measuring the angular position of at least one of said at least one coiler, wherein the coiler/uncoiler and further characterised in that the position of the said moveable roll is automatically controlled as a function of the coiler/uncoiler rotational angular position of at least one of said at least one coiler.

9. (Amended hereby) The An apparatus according to of claim 8, further comprising a roll position controller, wherein said roll position controller can cause

movement of said in which the moveable roll is moved by a roll position controller,
wherein said roll position controller comprises such as a hydraulic cylinder.

10. (Amended hereby) The An apparatus according to of claim 8, further
comprising in which a roll position transducer, wherein said roll position transducer can
be is used to measure the position of the said roll.

11. (Amended hereby) The An apparatus according to of claim 8, further
comprising in which an electronic controller and a servo valve, wherein said electronic
controller and said servo valve can be are used to control the position of the said roll
according to a reference position.

12. (Amended hereby) An The apparatus according to of claim 8, further
comprising which includes a control system, wherein said control system can control
which controls the position of the said movable roll rolls, the control system controls the
position of the rolls in response to information from the said angular position transducer
measurer or measurers.

13. (Amended hereby) An The apparatus according to of claim 8, wherein said in
which a moveable roll is provided between a coiler at least one of said at least one
coiler and a rolling mill stand or other processing stage.

14. (Amended hereby) A method of handling a metal strip, the method comprising
providing a first coiler and a second coiler in a metal strip, passing the a metal strip from
a first coiler to a second coiler, via a strip path for the metal strip being defined between
a first location and a second location, contacting a moveable roll with contacting the
metal strip between the first location and second location, the method including and
measuring the rotational angular position of at least one of the coilers and moving the
moveable roll so as to change the length of the strip path, the moveable roll being
moved as a function of the rotational angular position of at least one of the coilers.

15. (Amended hereby) The A method according to claim 14, wherein the diameter of a coil formed by said metal strip about a coiler has an eccentricity and rotation of the coil causes tension variations in the metal strip due to the eccentricity, wherein the tension variations in the metal strip follow a tension variation pattern associated with the rotational angle of the coiler, said method further comprising moving the moveable roll which in a roll movement pattern of movement of the moveable roll as a function of the coiler/un-coiler angle is chosen to reduce the tension variations caused by rotation eccentricity of the coil diameter.

16. (Amended hereby) The A method of claim 15, wherein according to claim 4 characterised in that the roll movement pattern of movement of the moveable roll as a function of the angular position of the coiler/uncoiled is calculated in advance of said passing step as a function of the anticipated eccentricity amplitude at varying rotational angles of the coil and the geometry of the moveable roll.

17. (Amended hereby) The A method of according to claim 16 30, wherein the characterised in that the anticipated amplitude of the coil diameter eccentricity is based on at least one of the group consisting of the material type and/or composition of the strip material, the strip material thickness, the strip and/or the material temperature, and and/or the number of laps of the strip on the coil.

18. (Amended hereby) The A method of according to claim 14, further comprising moving in which the movable roll in response to a signal, wherein the movable roll has a response time, and adding an offset is added to the measured coiler/uncoiler coiler rotational angular position in order to phase advance the signal to compensate for the response time of the moveable roll.

19. (Amended hereby) The A method of according to claim 18, wherein in which the offset is a function of the coiler drum rotation speed.

20. (Amended hereby) The A method of according to claim 14, further comprising
using a in which the the control system controls to control the position of the roll or rolls
in response to the rotational angle of the coiler information from the measurer or
measurers in combination with further information, The further information being
information about one or more of selected from the group consisting of the thickness of
the strip, the material forming the strip, the temperature of the strip, the number of
passes of the strip through the rolling mill stand or other process stage, the number of
laps of the strip on the coiler, the geometry of the strip length, the geometry of the
moveable roll to the rolling mill stand or other process stage, the geometry of the
moveable roll to the a further roll, the response time of the moveable roll, and the speed
of rotation of the coiler.

21. (Amended hereby) The A method of according to claim 14, further comprising
in which calculating an eccentricity amplitude for the system and obtaining a corrected
eccentricity amplitude by correcting the calculated eccentricity amplitude the method
provides one or more methods by which the system the corrects the calculated
eccentricity amplitude to give a corrected eccentricity amplitude.

22. (Amended hereby) The A method of according to claim 21, wherein in which
the method corrects the calculated eccentricity amplitude is obtained by measuring the
rotational speed of the coiler, wherein a decrease in speed of the coiler corresponds
corresponding to the strip being applied over the location of eccentricity resulting in a
corrected eccentricity amplitude which is greater than the calculated eccentricity
amplitude and / or an increase in the rotational speed of the coiler at an angular position
where the strip is applied over the location of the eccentricity resulting results in a
corrected eccentricity amplitude which is lower than the calculated eccentricity
amplitude.

23. (Amended hereby) The A method of according to claim 21, wherein in which
the calculated eccentricity amplitude is corrected by measuring the tension in the strip
and / or by measuring the load on the moveable roll, the method provides that wherein,

if the tension in the strip increases and / or the load on the roll increases as the strip is applied over the position of the eccentricity then the corrected eccentricity amplitude is greater than the calculated eccentricity amplitude, and / or ~~the method providing that if the tension is reduced and / or the load on the roll is reduced as the strip is applied over the location of the eccentricity then the corrected eccentricity amplitude is less than the calculated eccentricity amplitude.~~

24. (Amended hereby) The A method of according to claim 21, wherein in which the calculated eccentricity amplitude is corrected by measuring the coil diameter and particularly the coil diameter for the eccentricity.

25. (New) The apparatus of claim 1, wherein at least one of said coilers comprises a drum with a slot, wherein said slot can receive an end of a metal strip, wherein said slot rotates with rotation of said drum to cause a metal strip having an end placed in said slot to coil about said drum or to uncoil from said drum depending on the direction of rotation, and wherein the rotational angular position of said at least one of said coilers is determined by the rotational position of said slot.

26. (New) The apparatus of claim 8, wherein at least one of said coilers comprises a drum with a slot, wherein said slot can receive an end of a metal strip, wherein said slot rotates with rotation of said drum to cause a metal strip having an end placed in said slot to coil about said drum or to uncoil from said drum depending on the direction of rotation, and wherein the rotational angular position of said at least one of said coilers is determined by the rotational position of said slot.

27. (New) The method of claim 14, wherein at least one of the coilers comprises a drum with a slot, one end of the metal strip is inserted in the slot, the slot rotates with rotation of the drum to cause the metal strip to coil about the drum or to uncoil from the drum depending on the direction of rotation, and wherein the rotational angular position of the coiler is determined by the rotational position of the slot, each revolution of the coiler drum causing a pattern of tension variations in the metal strip associated with the

eccentricity caused by the insertion of the end of the metal strip in the slot, wherein said method comprises moving the moveable roll in a moveable roll movement pattern to reduce the amplitude of the pattern of tension variations in the metal strip during rotation of the drum.

28. (New) A method of handling a metal strip, the method comprising passing a metal strip from a first coiler to a second coiler, wherein a strip path for the metal strip is defined between a first location and a second location, contacting the metal strip with a moveable roll between the first location and second location, the method further comprising measuring the angular position of at least one of the coilers and moving the moveable roll so as to change the length of the strip path, the moveable roll being moved as a function of the rotational angular position of at least one of the coilers, wherein the moveable roll is moved in response to a signal and the moveable roll has a response time, the method further comprising adding an offset to the measured coiler rotational angular position in order to phase advance the signal to compensate for the response time of the moveable roll.

29. (New) The method of claim 28, wherein the offset is a function of the coiler drum speed.

30. (New) The method of claim 16, wherein the metal strip is coiled on one of the coilers to form a coil, the coil has an anticipated amplitude of eccentricity and the pattern of movements of the moveable roll adjusts the strip path length to account for the anticipated amplitude of eccentricity of the coil.